MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences)

9 MARCH 2016
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **FOUR** pages (excluding the cover page).
2. Answer **FIVE** out of **SIX** questions. Marks will be given for the first five questions answered.
3. Write your answers in the Answer Booklet.

Instructions: Answer **FIVE** questions only. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

Lucy is an online user that prefers to purchase products and services over network. But she is worried about her data privacy as she needs to provide certain information into the applications to proceed with the transaction.

a. List and briefly explain **TWO (2)** forms of input that can be used to enter data and instructions to the computer.

(3 marks)

b. List **THREE (3)** benefits of using online shopping applications for both customer and seller.

(3 marks)

c. Most of the online system that Lucy accessed used relational database to store information about their products and services as well as customer's details.

i. What is relational database? Identify **TWO (2)** advantages of using this data model.

(3 marks)

ii. Identify the primary key and the name of the table below:

(1 mark)

Customer		
CustomerID	**CustomerName**	**CustomerAdd**
001	Mark Adam	Jalan Sejahtera, Taman Nuri,75450 Melaka

QUESTION 2 [10 Marks]

Success Sdn. Bhd. plans to promote their product using multimedia application which will be displayed using Liquid Crystal Display (LCD) screen. This application will consist of graphic, video and audio files.

a. Suggest and briefly explain the suitable type of LCD technology for this application. Write **ONE (1)** reason to support your answer.

(3 marks)

b. Basically all the multimedia files used in the application need to be compressed to reduce the file size. Identify and explain briefly **TWO (2)** techniques of the compression.

(3 marks)

Continued...

c. The programmer needs to consider the suitable multimedia authoring software to develop the application.

i. What is multimedia authoring software?

(1 mark)

ii. List all steps of program development life cycle (PDLC) to guide the programmer through the development of the application. Write your answer in the **CORRECT** order.

(3 marks)

QUESTION 3 [10 Marks]

a. What are low-level programming languages? List and briefly explain **TWO (2)** types of low-level programming languages.

(4 marks)

b. Match the terms on the left table with the **CORRECT** explanation on the right table.

(3 marks)

i. Cache	A. Ceramic/ metal component with fin that absorbs and disperses heat
ii. Register	B. Uses to store frequently used instructions and data
iii. Pipelining	C. Controls the timing of all computer operations
iv. System Clocks	D. The main circuit board of the system unit
v. Heat Sink	E. Processor begins fetching a second instruction before it completes the first instruction
vi. Motherboard	F. Small and high-speed storage location that hold data and instructions temporarily

c. Identify and briefly explain **TWO (2)** weaknesses of using file processing system to store and manage data.

(3 marks)

Continued...

QUESTION 4 [10 Marks]

Zack wants to create a digital audio file using his computer and upload it to a website. The file will be playback for one minute duration and can only be downloaded by registered user.

a. The file size is large, so it will be stored in an external hard disk. Help Zack to identify **THREE (3)** advantages of using external hard disk.

(3 marks)

b. Zack is still considering on the type of audio that should be used for the file. Explain briefly to him the different between streaming and non-streaming audio. Provide **ONE (1)** example for each type of the audio.

(3 marks)

c. Zack's computer needs to have communication devices such as modem and network interface card in order to access and upload file to the website.

i. What is communication device?

(1 mark)

ii. Suggest and briefly explain **TWO (2)** types of modem that can be used by Zack.

(3 marks)

QUESTION 5 [10 Marks]

Nowadays, it is easy for user to download files and applications from the Internet and use it in their computer. Some of these files and application can be downloaded for free or with subscription fees.

a. Identify and briefly explain **TWO (2)** forms of software that are available to be downloaded for free.

(3 marks)

b. Give **TWO (2)** network architectures that can be used by these users to download files over the Internet.

(3 marks)

c. Every applications or programs downloaded normally require license agreements and product activation to avoid software theft. List **TWO (2)** actions permitted and **TWO (2)** actions not permitted for user upon acceptance of the agreement.

(4 marks)

Continued...

QUESTION 6 [10 Marks]

a. Processor is the main component of a computer that has significant impact to the overall computer's operations. List and briefly explain **TWO (2)** components in processor that work together to perform processing operation.

(3 marks)

b. One of the functions of operating system is to allow users to perform maintenance-type tasks or utilities such as disk defragmenter.

i. What is disk defragmenter? Explain the benefit of it.

(2 marks)

ii. List **FOUR (4)** other utilities available for user.

(2 marks)

c. Suggest **THREE (3)** precautions to protect computers and mobile devices from computer virus and malicious infections.

(3 marks)

End of Paper